

RTD-288

Groundwater contamination a growing problem in L.A. County wells

By **Rong-Gong Lin II and Priya Krishnakumar**

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Decades ago, industrial pollution began fouling some groundwater wells throughout Los Angeles County. That prompted water officials to stop using the most polluted wells and rely more on water from Northern California and the Colorado River.

But as this imported water becomes scarcer and more expensive, some water agencies are again looking underground for water. And that’s likely to be a costly endeavor.

Contaminated wells are an increasing problem in Los Angeles County, according to a new [analysis](#) of state [data](#) performed by the UCLA Luskin Center for Innovation. There are less-polluted wells that remain in service: they pump out contaminated water and need to undergo costly purification before it is routed to faucets in homes and offices.

Most large community drinking water systems rely at least partially on contaminated groundwater sources, according to the report. Aquifers underneath the ground in the San Fernando and San Gabriel valleys have been polluted with industrial flows and dirty runoff.

Water wells with contaminated groundwater

Below is an interactive map of the percentage of wells in a water system found to have contaminated well water at least twice between 2002 and 2010. The contaminants were detected in raw groundwater, prior to purification.

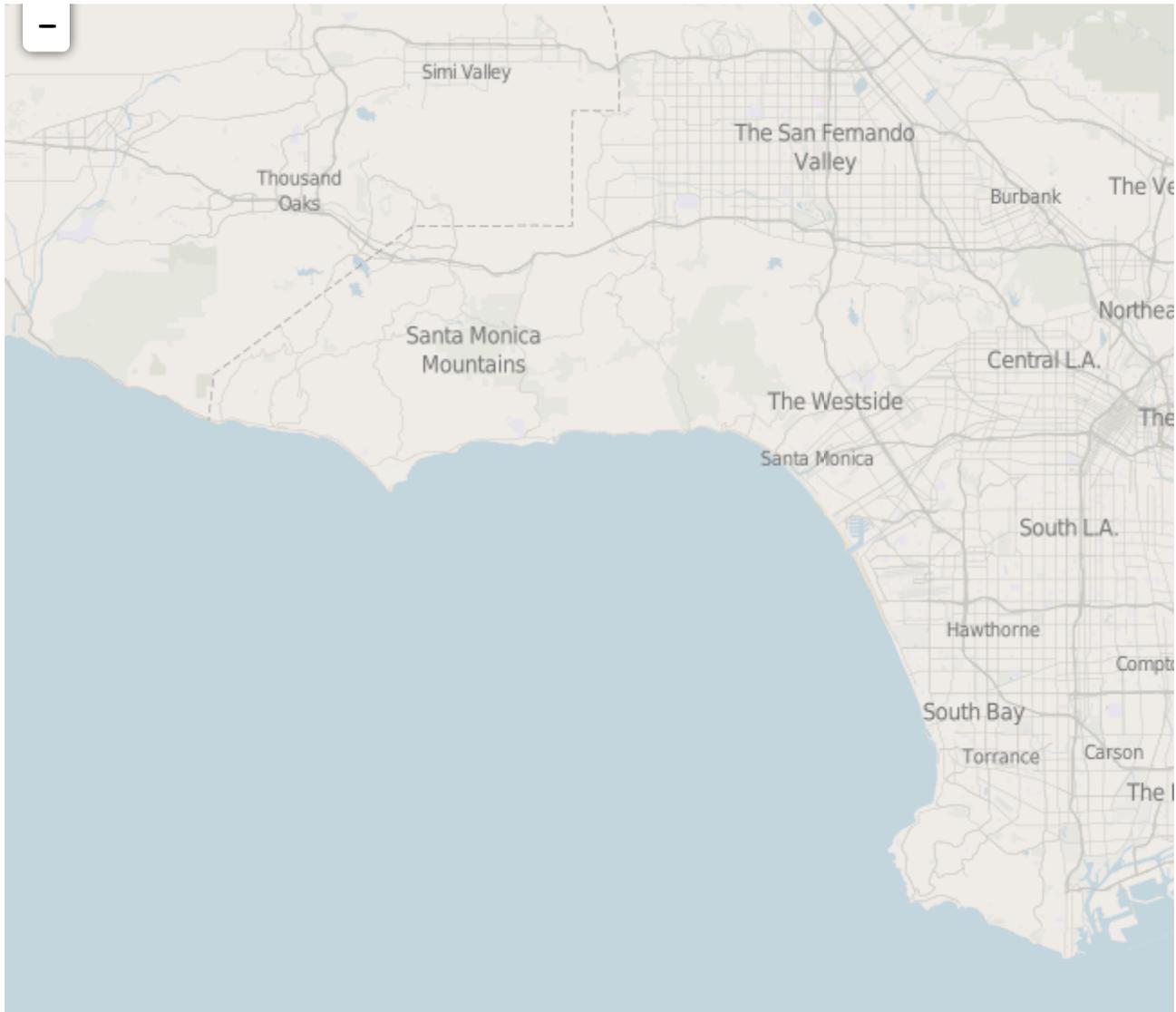
**Mouse over areas in L.A. County to see more specific data for every water district.
Zoom out to see northern L.A. County.**

Percent of wells with contaminated groundwater



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Some wells have shown evidence of contamination over the years but remain clean enough to still be purified and used. Others are more polluted. In the 1980s, the Los Angeles Department of Water and Power had to begin closing some wells in the San Fernando Basin, which is one of the largest Superfund pollution sites in the United States.

The region's underground plumes of pollution are steadily expanding, and the DWP has said that within five to eight years, the plumes will become so dense and permanent that the rest of the wells in that area would need to be shut down unless the agency can begin purifying more contaminated well water.

The DWP now has plans to build the world's largest groundwater treatment center in the San Fernando Valley.

Other cities and water systems ought to take note of these costs, said Henry McCann, the lead

author of the UCLA Luskin report.

“With the instability of imported water sources from the Delta and the Colorado River, many of the big cities in Los Angeles County are interested in developing their local sources and reducing their reliance on imported water,” McCann said.

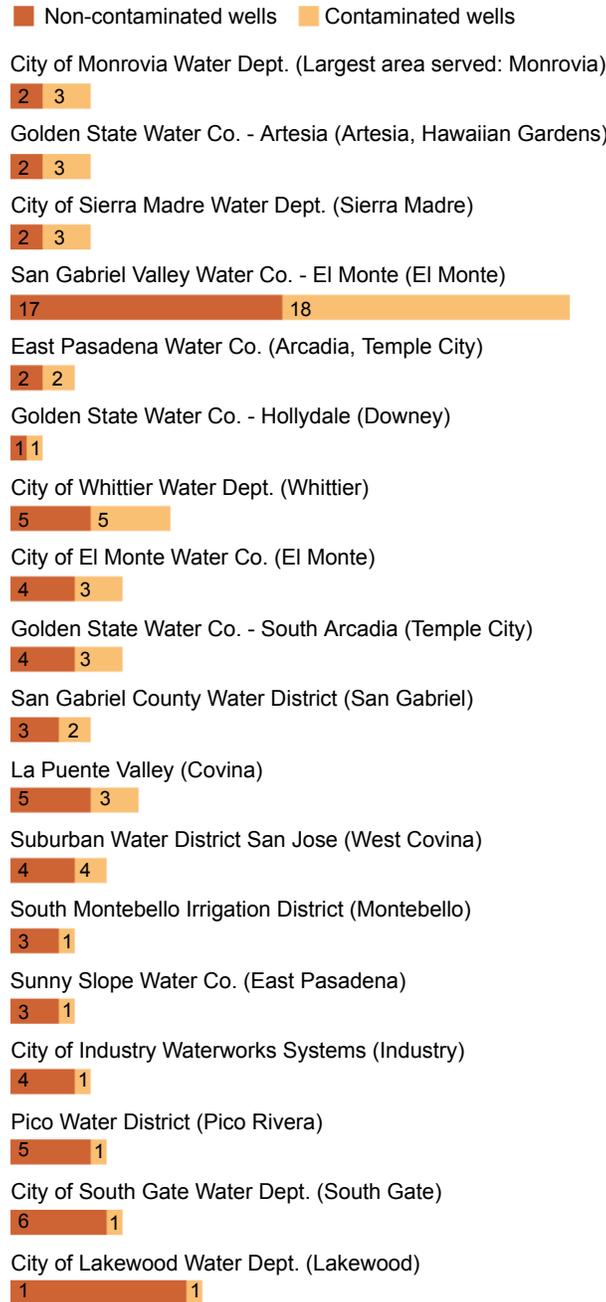
“The reality is that ... if we’re going to rely more heavily on groundwater, we need to understand that to treat water, there are greater expenses” such as the need for electricity, which in turn could increase greenhouse gas emissions into the atmosphere, he said.

Relying on groundwater

Rates of well contamination in districts using only groundwater that serve at least 5,000 customers.



Number of contaminated wells in districts using only groundwater that serve at least 5,000 customers:



Despite the costs, cleaning contaminated well water could ultimately be more cost-effective than relying on increasingly costly imported water, said Albert Gastelum, the DWP’s director of water quality.

“The costs of the imported water from the State Water Project or from the Colorado River is just

going to go up,” Gastelum said.

When operational, the new purification plant in the Valley would enable the DWP to clean water from wells that are now out of service, Gastelum said. “We’ve come to the point where half of the original wells in the San Fernando Basin aren’t reliable.”

The purified water that the DWP serves to customers meets all requirements for health and safety, Gastelum said. “The water we serve meets standards and is safe to drink,” he said. “Our water has never been better at the tap.”

State officials, however, have warned that smaller water systems sometimes serve contaminated water when they are unable to treat polluted water or find alternative clean sources. A report written by the State Water Resources Control Board to the California Legislature in 2013 said that smaller water systems “typically lack the infrastructure and economies of scale of larger water systems, and in some cases cannot afford to treat or find alternative supplies for a contaminated drinking water source.

“As a result, small community water systems may be more vulnerable to serving contaminated groundwater to their customers than larger water systems,” the report said.

Furthermore, there are about 2 million Californians that rely on groundwater from private domestic wells or other well water systems not regulated by the state, which does not require these well owners to test water quality.

State officials said they identified water systems that rely on contaminated groundwater sources to help focus efforts and resources to ensure that safe drinking water is available to customers.

Gastelum said he is aware that smaller water systems sometimes can struggle to deal with contaminated well water. One idea that has been suggested is asking bigger water utilities to “adopt” smaller water systems and offer help.

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Note: The data is based on active wells, as of October 2011, used to supply drinking water to community water systems, where a principal contaminant has been detected on two or more occasions at a level greater than the maximum contaminant level between 2002 and 2010. The contaminants were detected in raw groundwater, prior to any blending or treatment, and do not represent the quality of water ultimately served to the public.

Sources: "[Los Angeles County Community Water Systems: Atlas and Policy Guide Volume 1](#)" (2015), UCLA Luskin Center for Innovation; [Communities that Rely on a Contaminated Groundwater Source for Drinking Water](#), [State Water Resources Control Board](#).

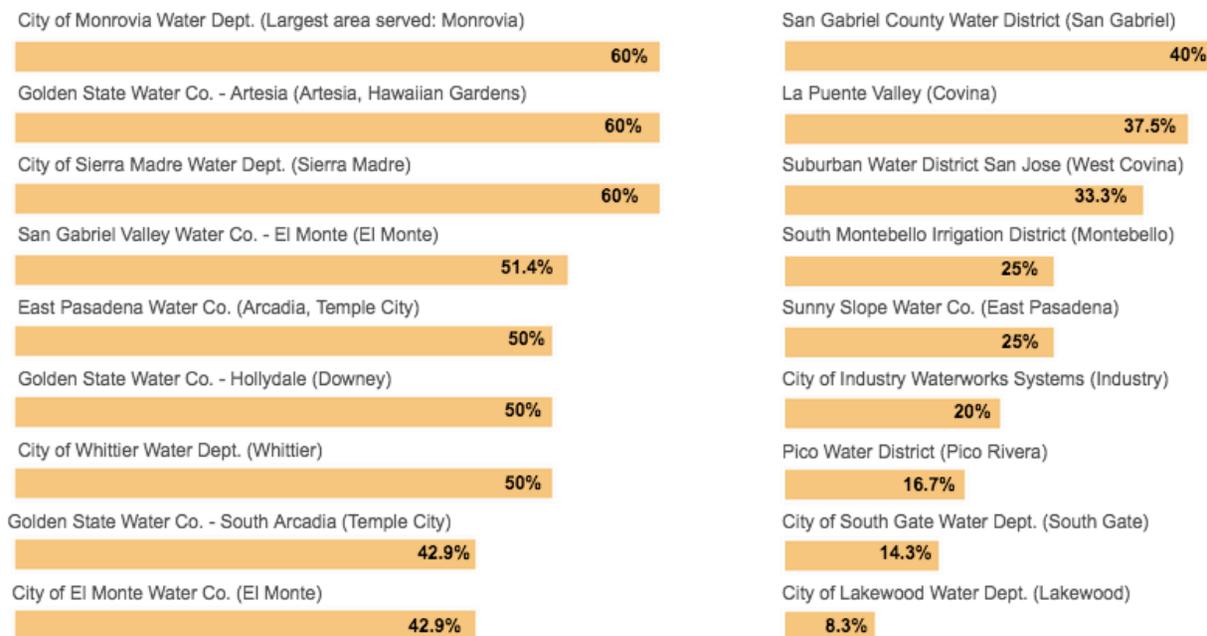
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